Australian Bureau of Statistics

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INTRODUCTION

28.1 The Survey of Employee Earnings and Hours has been conducted since 1974. It is currently conducted biennially. The survey produces estimates of the composition and distribution of employee earnings and hours, as well as estimates of the proportion of employees whose pay is set by awards only, by collective agreements and by individual agreements. Estimates from the survey are used by Commonwealth and State government departments, employer associations, trade unions and academic researchers. They are used in developing and reviewing wages and labour market policies, in the wage negotiating process, and in research into various aspects of the labour market.

SURVEY OUTPUT

28.2 Estimates are published initially in **Employee Earnings and Hours, Australia, Preliminary** (Cat. no. 6305.0) and later in the more detailed publication **Employee Earnings and Hours, Australia** (Cat. no. 6306.0). More detailed data are available on request.

28.3 A number of series are compiled from the survey based on the distribution and composition of earnings and paid hours, and the mechanism by which pay is set. These include:

- Distribution of employees by levels of: weekly total earnings; weekly ordinary time earnings; weekly overtime earnings; weekly total hours paid for; weekly ordinary time hours paid for; and weekly overtime hours paid for.

- Composition of average weekly earnings: average weekly total earnings; average weekly ordinary time earnings; average weekly base pay; average weekly taxable allowances paid; average weekly payment by measured result; and average weekly overtime earnings.

- Average hourly earnings (not available for managerial employees): average hourly ordinary time earnings; and average hourly total earnings.

- Composition of hours paid for (not available for managerial employees): average weekly total hours paid for; average weekly ordinary time hours paid for; and average weekly overtime hours paid for.

- How pay is set: award; collective agreement; and individual agreement (collected for the first time in 2000).

28.4 Data can also be cross-classified by: State/Territory; sector (public/private); level of government; industry (4 digit ANZSIC); employer size; sex; full-time/part-time; adult/junior; managerial/non-managerial; permanent/temporary/casual; status of employee (working proprietor, managerial/executive, supervisor, apprentice/trainee, other); and occupation (4 digit

ASCO).

28.5 Data on how pay is set were first collected in the May 2000 survey and include: proportion of employees whose pay is set by each pay setting mechanism; and average weekly total earnings (by pay setting mechanism).

28.6 Data are compiled according to the concepts and definitions outlined in Chapters 4 (employees) and 11 (earnings).

SCOPE

28.7 For the first stage sample of employing businesses (MUSs), the standard scope exclusions for ABS labour-related business surveys (outlined in Chapter 23) apply to this survey.

28.8 The scope of the second stage sample is restricted to civilian employees based in Australia who received payments during the survey reference period. Self-employment jobs (such as proprietors/partners of unincorporated businesses), jobs for which payments were not made during the reference period (such as jobs held by persons on unpaid leave), jobs based outside Australia, and members of the Australian permanent defence forces are not in scope of the survey.

SURVEY METHODOLOGY

28.9 Detailed information is obtained about a sample of employees from each selected business using a mail-out/mail-back collection methodology.

28.10 The survey reference period is the last pay period ending on or before the third Friday in May of the survey year. Businesses are asked to include only one week's proportion of hours paid and related earnings if their payroll is not weekly.

28.11 Businesses which do not mail back their completed questionnaire within a reasonable period of time after the survey reference date are followed up by mail and then phone if necessary. The response rate for the 1998 collection was 98.5% at the MUS level and 97.4% at the employee level.

SAMPLE DESIGN

28.12 A probability sample design is used. The sample of employees is obtained using a stratified two stage selection approach which involves: first, the ABS selecting a sample of businesses from the ABS Business Register; and second, each selected business selecting a sample of employees from their payroll(s).

28.13 The selection unit for the first stage selection is the Management Unit/State (MUS). The collection and reporting units used in the survey usually correspond to the selection unit. However, where the MUS unit is unable to provide information required for the survey, it may be split into a number of 'reporting units'.

28.14 Second stage sampling units (employees) are selected using systematic sampling within the selected first-stage units. For further information on statistical units used in ABS business surveys refer to Chapter 23.

STAGE ONE SELECTION

28.15 A probability sample of employing businesses (MUS units) is drawn from the ABS Business Register using the process outlined in Chapter 23. Variables used to stratify the survey frame at stage one of the sample selection are:

- State or Territory;

- sector - the public and private sectors are stratified separately;

- industry - within the private sector, industry stratification is based on ANZSIC division; within the public sector ANZSIC divisions are aggregated to form four broad industry groupings; and

- employment size - the ranges used vary between States and Territories, sectors and industries.

28.16 Strata on the survey frame that are completely enumerated include those containing MUSs with benchmark employment greater than a set cutoff (this cutoff will vary for different States/Territories) and strata with a very small number of MUSs. Strata which are completely enumerated because they contain a low number of MUSs may become sampled strata if the number of MUSs in those strata increases sufficiently.

28.17 In addition to constraints outlined in Chapter 23, sample selection is constrained by the need to ensure that there is maximum overlap with the quarterly Survey of Average Weekly Earnings and minimum overlap with other surveys.

STAGE TWO SELECTION

28.18 Second stage sampling units (employees) are selected using systematic sampling within selected first-stage units. A random start and a skip are provided to each selected business for use in selecting the second-stage sample from its payroll(s). Units with an unknown employment size are given a skip of one. Businesses are not required to order their payroll in any particular way when selecting the sample.

SAMPLE SIZE AND ALLOCATION

28.19 For the first-stage sample, approximately 8,000 MUSs are selected to yield a live sample of approximately 6,800 MUSs.

28.20 For the second-stage sample, approximately 59,000 employees are selected. The maximum number of employees for any reporting unit is 40.

SAMPLE RESELECTION

28.21 The ABS reselects the sample for the Survey of Employee Earnings and Hours each time it is conducted. At the same time the overall design of the sample is examined to ensure that it remains efficient and cost-effective.

ESTIMATION

28.22 The estimation process occurs in two stages. In the first stage, number raised estimation is used to estimate the number of employees in each business. In the second stage, number raised estimation is again used to estimate the total number of businesses, and therefore employees, in the target population.

28.23 In the sampled strata, the Live Respondent Mean method is used to impute for missing data items. In the completely enumerated strata a ratio imputation model is used.

28.24 Survey outliers are handled using the 'surprise outlier' technique.

28.25 New Business Provisions were introduced in the 2000 survey. Adjustments are made to survey estimates to allow for births and deaths of businesses that have occurred up to the end of the survey reference period but which are not reflected on the survey frame.

28.26 For further information on estimation methods used in ABS Business Surveys, refer to Chapter 23.

TIME SERIES ESTIMATES

28.27 Seasonally adjusted and trend estimates are not produced for this survey.

RELIABILITY OF THE ESTIMATES

28.28 Estimates from the survey are subject to both sampling and non-sampling error. The relative standard errors of survey estimates are published in both **Employee Earnings and Hours, Australia, Preliminary** (Cat. no. 6305.0) and **Employee Earnings and Hours, Australia** (Cat. no. 6306.0).

28.29 The ultimate cluster variance estimation technique is used to calculate estimates of variance for this survey. For further information on the ultimate cluster variance estimation technique, or on sampling and non-sampling error, refer to Chapter 16.

DATA COMPARABILITY OVER TIME

28.30 Although many estimates from previous years or collection cycles are on a consistent basis, care should be taken in using data from this survey on a time series basis. The survey is designed to give an accurate 'snapshot' of data rather than an ongoing series of observations over time. Hence the survey methodology and sample design are not specifically set up to provide time series data e.g. the sample is not set up to have the same employee jobs in it for more than one year. Nevertheless, average weekly earnings and hours data at aggregate levels are compiled in a consistent manner over time, although successive estimates would not be strongly correlated because of low sample overlap. The following changes have been made to survey methods, survey concepts, data item definitions, and frequency of collection.

1974 Annual survey commenced; first stage sample frame comprised lists of employers subject to payroll tax and lists of government departments and hospitals.
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1981 Survey frequency changed to biennial.
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1983 First stage sample frame changed to ABS Business Register.
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1986 Survey frequency changed to annual.
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1993 Changes to base pay definition.
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1995 Sample redesign on an ANZSIC basis.
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1996 Biennial survey recommended replacing annual survey.
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2000 Questions introduced on how pay is set. Live Respondent Mean imputation introduced. New Business Provision adjustments introduced. Completely enumerated sector imputation method changed. Second-stage sample reduced significantly.

FURTHER INFORMATION

28.31 For further details contact the Assistant Director, Labour Employer Surveys Section, on Perth (08) 9360 5240.

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